CLAIMS

- 1. An alkali-developable negative resist composition comprising a compound (A) which generates an acid upon exposure to radiation, and a resin component (B) which is made insoluble in alkali under the action of an acid, wherein the component (B) is a resin component containing:
- (b1) a unit which becomes insoluble in an alkali solution as a result of the formation of a lactone under the action of an acid generated from the component (A), and(b2) a unit having an alcoholic hydroxyl group.
- 2. The negative resist composition according to claim 1, wherein the lactone is δ -lactone.
- 3. The negative resist composition according to claim 2, wherein the unit (b1) is a unit derived from a (meth)acrylate ester having δ -hydroxy acid bonded to a non-aromatic polycyclic hydrocarbon group.
- 4. The negative resist composition according to claim 3, wherein the non-aromatic polycyclic hydrocarbon group is a group in which two hydrogen atoms are eliminated from a non-substituted or methyl-substituted tricycloalkane.
- 5. The negative resist composition according to claim 4, wherein the unit (b1) is a unit represented by the following general formula (I):

wherein R represents a hydrogen atom or a lower alkyl group.

- 6. The negative resist composition according to claim 1, wherein the unit (b2) is (i) a unit derived from an α -hydroxyalkyl acrylate ester.
- 7. The negative resist composition according to claim 6, wherein the unit (b2) is a unit represented by the following general formula (II):

wherein R¹ represents a lower alkyl group, a non-aromatic polycyclic alkyl group, a hydroxyl group-containing non-aromatic polycyclic alkyl group or a lactone-containing non-aromatic polycyclic alkyl group, and n represents an integer of 5 or less.

- 8. The negative resist composition according to claim 7, wherein R¹ is a lower alkyl group.
- 9. The negative resist composition according to claim 8, wherein R¹ is a methyl group.
- 10. The negative resist composition according to claim 7, wherein n is 1.
- 11. The negative resist composition according to claim 1, wherein the unit (b2) is a unit derived from a hydroxyl group-containing non-aromatic polycyclic alkyl ester of (meth)acrylic acid.
- 12. The negative resist composition according to claim 11, wherein the hydroxyl group-containing non-aromatic polycyclic alkyl group, which constitutes the hydroxyl group-containing non-aromatic polycyclic alkyl ester, is an adamanthyl group having at least one hydroxyl group.
- 13. The negative resist composition according to claim 12, wherein the unit (b2) is a unit represented by the following general formula (III):

wherein R represents a hydrogen atom or a lower alkyl group, and m represents an integer of 1 to 3.

- 14. The negative resist composition according to claim 13, wherein one hydroxyl group exists and the hydroxyl group is bonded to the adamanthyl group at the 3-position in the general formula (III).
- 15. The negative resist composition according to claim 14, wherein R is a hydrogen atom in the general formula (III).
- 16. The negative resist composition according to claim 14 for the development with an alkali developing solution having an alkali concentration of 1.0% by mass or more.
- 17. The negative resist composition according to claim 1, wherein the component (B) is a copolymer containing the unit (b1) and the unit (b2) in a molar ratio of 1:9 to 9:1.
- 18. The negative resist composition according to claim 11, wherein the component (B) is a copolymer containing the unit (b1) and the unit (b2) in a molar ratio of 1:9 to 9:1.
- 19. The negative resist composition according to claim 14, wherein the component (B) is

a copolymer containing the unit (b1) and the unit (b2) in a molar ratio of 8:2 to 4:6.

- 20. The negative resist composition according to claim 19, wherein the component (B) is a copolymer containing the unit (b1) and the unit (b2) in a molar ratio of 7:3 to 5:5.
- 21. The negative resist composition according to claim 1, further comprising a solvent (C), the solvent (C) containing water.
- 22. The negative resist composition according to claim 11, further comprising a solvent (C), the solvent (C) containing water.
- 23. The negative resist composition according to claim 21, wherein the solvent (C) contains propylene glycol monomethyl ether and water.
- 24. A method of forming a resist pattern, which comprises using the negative resist composition of claim 1.